REMARKS

1) Claims 1-20 are pending.

2) A terminal disclaimer is included in this correspondence for overcoming provisional rejections under the doctrine of double-patenting type obviousness for claims 1, 7-11 and 17-20.

3) Claims 3 and 13 are amended to overcome objections by including all the limitations of the base claims 1 and 10 and the intervening claims 2 and 12.

4) Claims 5 and 15 are amended to overcome objections by including all the limitations of the base claims 1 and 10 and the intervening claims 4 and 14.

5) Applicant requests entry of amendments to claims 1 and 9 in order to clarify that the "packet fixed correction coefficients" means that the correction coefficients are fixed in value during the time that they are applied to the packet.

6) At paragraph 6a of the outstanding Office action the Examiner Office has cited Kuenen et al. US2004/0063416 A1 under 35 USC 103(a) for rejecting claims 1, 2, 4, 6, 10, 11, 12, 14, 16 and 20.

7) Claim 1 of the pending application recites "computing packet-fixed correction coefficients from said I and Q signals during a measurement section for a packet; and correcting at least one of I/Q gain and I/Q phase of said I and Q signals with said packet-fixed correction coefficients for providing corrected said I and Q signals". Thus, the fixed correction coefficients that are computed during the packet are fixed during the time that they are being applied for correcting I/Q

gain and I/Q phase. However, this is not the case in Kuenen. In Kuenen the correction coefficients are changing while they are computed on (test) signal (generated by 530 FIIQC paragraph 0044), fixed at time T_2 (steps 450-470 in FIG. 4), and then the fixed correction coefficients may be applied to a signal for normal operation (paragraph 0032).

8) There is no indication in Kuenen that he applies fixed coefficients to the same signal that he computes the coefficients from. In fact the portions of Kuenen relied on by the Examiner (211, 212, 214, 215, and 217 of FIG. 2) clearly show a feedback loop with a feedback error signal (paragraph 0032) for driving the adapter 217 and FIR filters 214 and 215. It is well-known that such feedback system provides correction coefficients that are varying according to the feedback error signal for correcting I/Q gain and I/Q phase (in the FIR filters 214 and 215). Similarly, other portions of Kuenen relied on by the Examiner (235 in FIG. 2, paragraph 0034) show feedback system using a feedback error for adjusting correction coefficients to summer 231 and multiplier 232. Therefore, the coefficients in Kuenen are variable and not fixed during the signal on which the coefficients are computed.

9) The teaching of packets of the prior art fails to correct this defect in Kuenen. If Kuenen's test signal is a packet or several packets there is still no way that Kuenen can apply a coefficient that is fixed to the same packet that he uses to compute the coefficient.

10) At paragraph 6b of the outstanding Office action the Examiner misconstrues the TABLE 1. The rows on TABLE 1 show values of λ. Step size λ determines the gain of the FIR filter 300 (by performing right shifts, paragraph 0037). The correction coefficients that are applied to the signal (data-in path 320 to data-out path 330) for correcting I/Q gain and phase are the coefficients h_1 - h_8

(FIG. 3) in the FIR filter 300. The Examiner's statement that the correction coefficients are fixed during each time (sic) signal λ is incorrect. The correction coefficients that are applied to the signal are changing as controlled by the feedback error signal in the feedback loop while the step size λ is fixed.

11) The limitations of the test signal technique of Kuenen were known and described by the Applicant in the third paragraph of the background of the invention in the original specification.

> "In one method, an offline test signal is used during manufacture or installation to align the I/Q gain to unity and the I/Q phase to 90° in the signal receiver. However, the performance of the receivers using the test signal method is limited by drift in the analog circuitry after the alignment. This limitation is reduced by performing the alignment periodically during operation. However, the periodic alignment adds overhead that reduces the efficiency of a signal communication channel."

PRECISE DEFINITION FOR "ON-LINE"

12) The Examiner relies on MPEP 2111 for arguing that she is entitled to give the broadest reasonable interpretation to the language of the claims. The Applicant refers to MPEP 2111.01 II which qualifies the broadest reasonable interpretation with instructions to give claim terms the ordinary and customary meanings attributed to them by those of ordinary skill in the art (underline added). In this case, the art is telecommunications. The Federal Standard 1037C Telecom Glossary 2000, Glossary of Telecommunications Terms http://www.its.bldrdoc.gov/fs-1037 defines on-line as:

"**on-line: 1.** Pertaining to the operation of a functional unit when under the direct control of the system with which it is associated. (188) *Note 1:* On-line units are available for immediate use on demand by the system without human intervention. *Note 2:* On-line units may not be independently operated. **2.** Pertaining to equipment that is connected to a system, and is in operation."

Kuenen's test signal method fails this definition in several ways, any one of which is definitive: it is not for immediate use on demand by the system, it is independently operated, it is not connected to the system and is not in operation in the sense of the definition which is normal operation of a telecommunications system for communicating data from one user to another.

13) Because the references relied upon by the Examiner fail to teach the claimed invention, the Applicant requests reconsideration and allowance of claims 1-20 as amended.

14) The Examiner is requested to telephone the Applicant's Agent at 650-853-0189 for a conference if such conference could expedite prosecution.

David R. Gildea date

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